

# Your Environment

## Section 14.1

### *Resources and Conservation*

■ **Main Idea** It is essential to conserve the natural resources that animals, plants, and humans need for survival.

## Section 14.2

### *Protect the Environment*

■ **Main Idea** Individual efforts make a difference when it comes to protecting the environment. Do your part by limiting waste, and use air, water, land, and energy wisely.





### Explore the Photo

There are many ways you can help protect and enjoy your environment. *How is this family doing both?*



### Writing Activity

#### Explanation

**How Did It Happen?** All around we can see examples of how pollution damages the environment. Think of a place near your home or school where you see litter, chemical waste, or other types of pollution. Write an explanation about how the pollution was created, and who or what may be responsible for it.

**Writing Tips** Follow these steps to write an explanation:

1. Begin with the statement that you will explain.
2. Arrange the text in sequence, or the order in which events or actions took place.
3. Use exact verbs to make your explanation clear.

## Reading Guide

## Before You Read

**Use Notes** When you are reading, keep a notebook handy. When you read a phrase or term that you do not understand, write it down in the form of a question in your notebook. After you have finished the section, look up the terms and try to answer your questions based on what you have read.

## Read to Learn

## Key Concepts

- ✓ **Identify** the four key natural resources and why we need to protect them.
- ✓ **Explain** how you can do your part to conserve water and energy.

## Main Idea

It is essential to conserve the natural resources that animals, plants, and humans need for survival.

## Content Vocabulary

- natural resource
- fossil fuel
- pollution
- conservation
- soil

## Academic Vocabulary

- key
- efficient

## Graphic Organizer

As you read, identify the four main natural resources. Use a graphic organizer like the one shown to help you organize your information.



- 🔗 **Graphic Organizer** Go to this book's Online Learning Center at [glencoe.com](http://glencoe.com) to print this graphic organizer.

## Academic Standards



## English Language Arts

**NCTE 7** Conduct research and gather, evaluate, and synthesize data to communicate discoveries.



## Science

**NSES F** Develop an understanding of natural resources; environmental quality; science and technology in local, national, and global challenges.



## Social Studies

**NCSS V F Individuals, Groups, and Institutions** Evaluate the role of institutions in furthering both continuity and change.

**NCTE** National Council of Teachers of English

**NCTM** National Council of Teachers of Mathematics

**NSES** National Science Education Standards

**NCSS** National Council for the Social Studies

**D**o you like to spend time at the beach or in the mountains? Have you ever gone swimming or fishing in a lake or an ocean? Enjoying outdoor activities is one of the greatest pleasures of life. In addition, you could not survive without the elements that nature provides. Taking care of the environment is essential to our survival. This responsibility belongs to everyone.

# Natural Resources

A **natural resource** is a material that is supplied by nature. You might not think about them very often, and you may even take them for granted. For example, you probably take a shower every day without even thinking about where the water comes from, or whether or not it will be there the next day. The health of every human, animal, and plant depends on several **key**, or necessary, natural resources. These include air, water, soil, and the energy that comes from coal, oil, and gas. We must protect these resources for our health and our survival.

At one time it seemed like these resources would last forever. Some, however, are nonrenewable. If they are used up or permanently damaged, they will no longer be available. This damage is often caused by pollution. **Pollution** is the changing of air, water, and land from clean and safe to dirty and unsafe.

## Air

Your body uses the oxygen in air to produce energy. Plants use the carbon dioxide in air to produce food and oxygen. Unfortunately, the air you breathe is not completely clean. It may contain dust, smoke, chemical particles, and smog. These substances, which are all forms of air pollution, can be harmful to your health. Some causes of air pollution are:

- **Poisonous gases** such as car exhaust fumes that combine with the atmosphere to create smog when fuels are burned to provide energy.
- **Smoke** from sources such as fireplaces, barbecues, and burning leaves.
- **Chemicals**, including those that kill insects and those used as cooling substances in air conditioners and refrigerators.

## Water

Water, like air, is necessary to all living things. In fact, water is your body's most essential nutrient. It is needed for every bodily function. Humans can only survive for a few days without water.

### As You Read

**Connect** Imagine enjoying an ice cold glass of water or tea on a hot day. Besides drinking, what do you do every day that requires water?

### Vocabulary

You can find definitions in the glossary at the back of this book.

## SCIENCE YOU CAN USE



### Alternative Energy

Natural resources can provide alternative sources of energy. Alternative energy sources can be used instead of fossil fuels, coal, wood, and uranium. Alternative energy sources must be renewable, nonpolluting, easy to get, and affordable.

**Procedure** Collect data about alternative power sources. Create a chart that includes the alternative sources of energy and how they are used.

**Analysis** What alternative energy sources are used most? What do you think could be used more?

**NSES F** Develop an understanding of natural resources; environmental quality; science and technology in local, national, and global challenges.



## Clean Food and

**Water** Animals, plants, and humans all depend on water for survival.

*What can happen when animals drink or live in polluted water?*



You may think that there is plenty of water. After all, about 70 percent of the earth's surface is covered by water. Most of it, however, is salt water. Many plants and animals cannot use salt water. Humans cannot drink salt water. Animals and humans need clean, fresh water to survive.

Much of the earth's water is polluted by wastes. Common sources of water pollution are human wastes, detergents, and the chemicals used to kill insects or to fertilize crops. This can cause damage to animals and plants that use the polluted water. Polluted water can cause people and animals to become sick or die.

## Soil

The earth's land is made up of soil. **Soil** the loose material in which plants can grow. Soil is made up of mixture of rocks, decayed material, minerals, water, and air. Plants get the nutrients and water they need from the soil. People, in turn, need the nutrients that plants provide in order to live.

## Energy

What would happen if we ran out of gasoline for cars, trucks, and buses? How would we heat homes, schools, and office buildings if we ran out of oil and other kinds of fuel? You may think that this could never happen. However, many sources of energy are in limited supply. When oil, natural gas, and coal are used up, they cannot be replaced.

Another form of energy is nuclear energy. Nuclear energy boils water, creates steam, and turns generators to create electricity. Nuclear energy is made partly from uranium, a dense metal found in most rocks. Uranium is more plentiful than **fossil fuels**, which come from the remains of prehistoric plants and animals. Coal, natural gas, and petroleum are examples of fossil fuels.



### Reading Skills

**Read for Fun** Reading is not just for school. Make it a habit to read for pleasure every day. Spend time with an entertaining novel, comic books, magazines, or a graphic novel.



**Identify** What can cause air pollution?

## Conserve Resources

You may think that pollution and the shrinking supply of natural resources are beyond your control. There are many ways, however, that you can make a difference. One important way is to practice **conservation**, or the saving of resources. The best way to conserve a resource is to use less of it. When you take initiative, you take the first steps toward solving a particular problem. You and your family can work together to conserve natural resources. Some families add more insulation to their homes to save fuel. Insulation is a material installed in a building to keep it cooler in summer and warmer in winter. Families also can help by using extra sweaters and blankets in the winter so the heater does not get overused.


### Water

Water is a resource you may often take for granted. All you do is turn on the faucet, and the supply seems limitless. But there is a limit, and you need to conserve the water you have so that there is enough for everyone and for the future. Here are some ways you can conserve water:

- Turn off the water when brushing your teeth.
- Take showers instead of baths.
- Install water-saving showerheads and toilets.
- Repair leaky faucets.
- Run the washing machine only with a full load. Change the level of water in the washing machine according to the amount and type of clothing being washed.

### Energy

The **efficient**, or non-wasteful, use of energy is an important way to conserve resources. You can learn to use energy wisely. Look for appliances that are energy-efficient, or made to use less energy. By using energy efficiently, you not only conserve resources, but you can also save money and help reduce pollution.

 **Active Conservation** This teen is conserving water by turning off the faucet while she brushes her teeth. *What can you do to conserve natural resources?*



### Cell Phones

The average consumer replaces his or her cell phone every 18 months. Discarded phones fill up landfill space. Many contain toxic chemicals used in manufacturing them, such as arsenic, chemicals used as flame-retardants, and lead. The EPA warns that these substances may be linked to health problems, including cancer. Instead of tossing your old phone, donate it to charity, or contact your service provider about recycling it. You may even get a credit toward a new phone when you turn in your old one for recycling.



### Reading Skills

**Skimming** Before you read, skim the section or chapter. This means to quickly look through the pages for headlines, bold or italicized words, highlighted words, and captions. This will give you the main idea before you go back to read closely.



You can save energy at home in many ways. Most of the energy used at home is for heating and cooling, running appliances, and lighting. When your family members buy new appliances, they can look for the most energy-efficient ones by comparing guides that list energy costs per year. Here are some ways to conserve energy at home:

- Use only the amount of hot water you actually need.
- Keep doors to closets and unused rooms closed. There is no need to heat or cool those spaces.
- Whenever possible, use a microwave oven.
- When you use a conventional oven, cook several items at the same time, and avoid opening the oven door while foods are cooking.
- Run the dishwasher only with a full load.
- Avoid leaving the refrigerator door open for too long.
- Use lined drapes to keep the cold out in the winter and the heat out in the summer.
- Seal cracks or gaps around the doors and windows.
- Use energy-saving light bulbs. Many types are available that use less energy and burn longer than standard bulbs.
- Turn the thermostat up in the summer and down in the winter.

## Section 14.1 After You Read

### Review What You Have Learned

1. **Identify** common sources of water pollution.
2. **Recognize** energy-efficient appliances.

### Practice Academic Skills



#### English Language Arts

3. Find out how your family uses water and electricity. Then, evaluate the efficiency of your family's use of resources. Record what needs to be improved. Write a plan for your family to improve resource conservation in your home.

**NCTE 7** Conduct research and gather, evaluate, and synthesize data to communicate discoveries.



#### Social Studies

4. Research environmental organizations that focus on ending pollution or conserving natural resources. Write a list of five different issues the organizations address. Next to each issue, suggest an idea for how you can do your part.

**NCSS V F** Evaluate the role of institutions in furthering both continuity and change.



**Check Your Answers** Check your answers at this book's Online Learning Center at [glencoe.com](http://glencoe.com).

## Reading Guide

## Before You Read

**Pace Yourself** It can be more effective to focus on reading short sections in 10-minute blocks than trying to read a long section all at once. Read for 10 minutes. Take a short break. Then read for another 10 minutes.

## Read to Learn

## Key Concepts

- ✓ **Define** what is meant by “throwaway” society.
- ✓ **Identify** the negative effects of incineration and landfills.
- ✓ **Name** the “three Rs.”

## Main Idea

Individual efforts make a difference when it comes to protecting the environment. Do your part by limiting waste, and use air, water, land, and energy wisely.

## Content Vocabulary

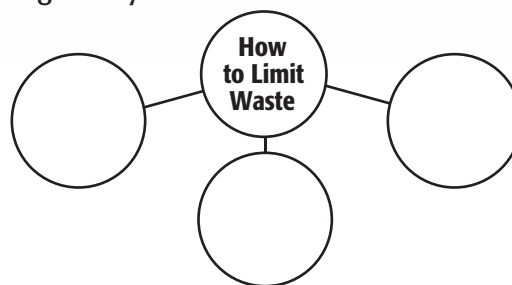
- recycling
- landfill
- decompose
- incineration
- biodegradable

## Academic Vocabulary

- dispose
- permanent

## Graphic Organizer

As you read, identify and define the “three Rs” for how to limit waste. Use a graphic organizer like the one shown to help you organize your information.



**Graphic Organizer** Go to this book’s Online Learning Center at [glencoe.com](http://glencoe.com) to print this graphic organizer.

## Academic Standards



## English Language Arts

**NCTE 12** Use language to accomplish individual purposes.



## Mathematics

**NCTM Number and Operations** Understand numbers, ways of representing numbers, relationships among numbers, and number systems.



## Social Studies

**NCSS V G Individuals, Groups, and Institutions** Analyze the extent to which groups and institutions meet individual needs and promote the common good in contemporary and historical settings.

**NCTE** National Council of Teachers of English

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**NSES** National Science Education Standards

**NCSS** National Council for the Social Studies

**H**ow much do you add to the waste that is piling up? Do you know how to limit your use of resources and of the amount of waste you create? By following the “three Rs”, you, your family, and your friends can contribute to waste reduction and environmental protection.





## As You Read

**Connect** Why do many people think that they cannot make a difference in their environment?

## Do Your Part

You may think that as long as you do not litter, you are doing your part to keep your community clean. However, there is much more you can do. Since the middle of the 20th century, Americans have lived in a “throwaway” society. Many items are used only once and then thrown away. Think about the bags you use to carry groceries, or the containers used for leftover restaurant meals. As a result, a serious problem exists because there is too much waste. Currently, there are not enough safe ways to remove waste.

Protection of natural resources and the environment begins with people like you. There are many ways for you to make a difference:

- You can use air, water, land, and energy wisely.
- You can make an effort to be energy-efficient at home.
- You can be a concerned citizen who cares about the environment and works with others to keep it clean.



### Reading Check

**Describe** What problems are created for the environment in a “throwaway” society?

## Waste Removal

Billions of tons of waste are created every year in the United States. Where does it all go? Where should it all go? These questions are urgent because the waste continues to grow.

You can work to change the situation. Even though the waste problem is a national issue, the solution depends on individual actions. Your actions can help to make a difference. One way that individuals can help is by recycling. **Recycling** is turning waste items into products that can be used. You will read more about recycling later in this section.



### Reading Skills

#### What You Know

Before you read, write down what you already know about the subject. You may know more about the subject than you think you do!



#### Paper or Plastic?

Neither! Using a cloth grocery bag over and over again is one way an individual can help protect resources and the environment. **What other everyday items can you use over again?**



## Composting

In this activity you will learn how to make your own compost for fertilizer. Before you begin, read through the entire Hands-On Lab assignment. Write down any questions that you have about the activity. Reread the text or ask your teacher for help if you need it.



### Supplies

- ✓ Kitchen scraps
- ✓ Garden clippings
- ✓ Water
- ✓ Small shovel
- ✓ Garden soil

### Develop Your Plan


- Compost is a mixture of decayed plants and other organic matter used for enriching soil. Use compost to recycle materials that may otherwise end up in a landfill.
- Find a 3 foot x 3 foot spot outdoors where you can create your compost pile. If this is not possible where you live, ask your teacher for other options.
- Plan a carbon to nitrogen ratio of 20 to 1. For carbon, collect vegetable scraps, fresh lawn and garden clippings, and weeds. For nitrogen, collect dry leaves, sawdust, paper, straw, dry grass, and wood ashes.

### Implement Your Plan

- Pile your collect nitrogen and carbon materials into the 3 foot x 3 foot spot to decompose.
- With your shovel, turn the materials every two weeks for 10–12 weeks. Add more materials if they become available, keeping the 20 to 1 carbon to nitrogen ratio.
- Add water regularly so that there is about a 50% moisture content.
- After 10–12 weeks, mix the compost with garden soil.

### Evaluate Your Results

How much waste did you save by composting? Where can you use the compost? What was the most difficult part of the process? What would you change if you did this project again? Write one or more paragraphs to explain your answer.

 **Projects and Activities** Go to this book's Online Learning Center through [glencoe.com](http://glencoe.com) for more projects and activities.

## Character Counts

### Initiative

Noah rides his bike to school every day with a group of his friends. They always take the same route, and Noah has noticed that there is quite a bit of litter along the side of the street. Noah has been studying the environment in one of his classes, and he feels like he and his friends should do something about the litter on their route to school.

### You Make the Call

What should Noah do to help solve the litter problem in his neighborhood? Write a paragraph explaining what Noah should do and why.

## Landfills

About 80 percent of the waste in the United States is sent to landfills. A **landfill** is a huge pit where waste is buried between layers of earth. Most large communities have landfills somewhere on their outskirts, away from homes. These landfills are carefully designed to control the odors, germs, and other unhealthy situations that are created by piles of waste.

Landfills do cause problems, however. Waste buried in landfills is supposed to **decompose** so that it breaks down and becomes part of the soil.

However, recent studies have shown that certain kinds of waste, such as plastic foam, do not break down for many years. Landfills take up huge amounts of space, and no one wants to live near a landfill.

## Incineration

Another common way to **dispose**, or get rid, of waste in the United States is by incineration. **Incineration** is disposing of waste by burning it. About 10 percent of the waste in the United States is incinerated. When poisonous waste is burned, its smoke is especially dangerous. The air pollution created by burning waste can be so hazardous that it is illegal in many communities to burn waste.

### Vocabulary

You can find definitions in the glossary at the back of this book.



**Decide** Why is it important to have a carefully designed landfill in a community?

### Landfill

**Pollution** There are thousands of landfills in the United States. *Why do you think landfills will not be a waste-removal option in the future?*



## Reduce Waste

**E**very day, Americans throw away thousands of pounds of trash that ends up in landfills. You can make a difference in reducing waste at home, at your school, and in your community.




**Home** Separate plastic, glass, paper, and cardboard from the garbage you collect at home. Manufacturers can process all of these items and use them for new products or packaging.



**School** If your school participates in a recycling program, you can recycle the paper plates and plastic utensils you use for your lunch. Recycled paper is used to make newspaper and other everyday paper products. If your school does not have a recycling program, ask your teachers to help start one.

**Community** You can contribute to a recycling program, such as aluminum cans. Recycled aluminum is used every day by manufacturers around the world.





## Financial Literacy

### Cutting Energy Costs

Using energy efficient appliances, monitoring heating and cooling, and using energy-saving light bulbs can greatly reduce your energy costs. Presently your appliances cost you \$850 per year to operate. If you buy energy efficient appliances, you can save 15 percent a year. How much will you save if you use the appliances for ten years?

**Math Concept Percent Calculation** A percent is a ratio that compares a number to 100. To find the percentage of a number, take the percent and convert it a decimal by moving the decimal point two places to the right.

**Starting Hint:** Take the \$850 and multiply by .15 to find the yearly savings. Then multiply this answer by 10 years to get the total savings.

**Math** For math help, go to the Math Appendix at the back of the book.

**NCTM Number and Operations** Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

## Limit Waste

Burying waste in landfills and incinerating it both have serious drawbacks. They are both unsafe, and neither choice is a **permanent**, or long-term, solution. What should be done about the problem? The key is to reduce the amount of waste we create. All Americans can do their part by following the “three Rs,” which are Reduce, Reuse, Recycle.

### Reduce

The first step is to reduce, or lessen, the amount of waste created. To start reducing the amount of waste you create, you can reduce the amount of paper you throw away by using both sides of notebook and printer paper, using only washable cups and plates, and using cloth napkins. Avoid buying disposable products, and pre-cycle, or buy products that use less packaging material than others so there is less to throw away. Use cloth grocery bags instead of paper or plastic ones. Buy products that can be broken down and absorbed by the environment. These types of products are called **biodegradable**.

### Reuse

The second of the “three Rs” is reuse. You can limit the amount of waste you create by reusing items you might otherwise throw away. If you use your imagination, you can probably think of many ways to reuse items. Buy products packed in containers that can be refilled or used for something else. Keep boxes, bottles, and cans to use as storage containers. Save and use old towels and clothes as cleaning rags. Think twice before throwing something away. Ask yourself, “What else can I do with this?”

### Recycle

Many of the materials we throw away can be easily recycled. Recycling can greatly reduce the amount of waste in our country. For example, newspapers can be turned into pulp to make new paper. Aluminum cans can be melted down and turned into new cans and other products. Plastic can also be recycled. Over half of the waste we create is recyclable.



### COMMUNITY CONNECTIONS

**Thrift Shops** Clean out your closet and recycle! Find charitable organizations in your community that accept used clothing, shoes, and household items to sell in thrift shops or give to needy families.



Recycling also means donating clothes, books, and other items to charities. You also recycle when you give or receive secondhand clothes or exchange magazines with a friend after reading them. These actions may seem small, but each one helps to limit the amount of waste. Imagine how much can be accomplished if every individual makes an effort to use the suggestions in this chapter. By applying the “three Rs,” you will do your share to preserve the environment.

 **Use Your Imagination** Find creative ways to reuse items instead of throwing them away. *How can a yard sale or a swap meet help the environment?*

## Section 14.2 After You Read

### Review What You Have Learned

1. **Identify** three ways you can do your part to protect the environment.
2. **Explain** why incineration is not a safe way to remove waste.
3. **Suggest** three ways for people to reduce waste.

### Practice Academic Skills

#### English Language Arts


4. Imagine that you have a friend who thinks one person cannot make a difference when it comes to protecting the environment. Write a letter to your friend to convince him or her that individuals really can make a difference.

**NCTE 12** Use language to accomplish individual purposes.

#### Social Studies

5. Conduct research to find out about your school’s recycling policy. Does your school have a recycling program? Does your school make it easy to recycle? Prepare a short presentation for your class that explains the school’s policy, and add your own suggestions for improvement.

**NCSS V G** Analyze the extent to which groups and institutions meet individual needs and promote the common good in contemporary and historical settings.

 **Check Your Answers** Check your answers at this book’s Online Learning Center at [glencoe.com](http://glencoe.com).

# Discovering Careers

## Focus on Careers in Environmental Studies ▼



Do you have a passion for protecting our environment? Do you care about the planet and all of its creatures? If you answered yes to either of those questions, you might want to consider a future career in environmental studies. The following chart explores several careers in the environmental studies field.

### Career Activities ▼

#### At School

1 Select three of the careers listed. Research the education, training, and work experience required for each career. Write a summary of your results.

#### At Home

2 Go through your trash at home, and pull items that can be reused recycled. Create a reference list for your family.

#### At Work

3 List five careers for people who want to protect animals.

#### In the Community

4 Contact and interview someone in your community who works in environmental studies. Ask this person to describe what his or her typical work day is like. Share what you learned with your class.

Job Title	Job Description
<b>Environmental Analyst</b>	Conducts research studies to develop methods of controlling pollutants. Analyzes sources of pollution to determine their effects.
<b>Ecologist</b>	Researches environmental concerns. Makes studies to determine in what conditions varieties of plants grow and how species resist disease and insects.
<b>Pollution Control Engineer</b>	Plans and conducts engineering studies. Evaluates methods of pollution control to determine contaminants. Performs calculations to determine pollution emissions.
<b>Forester</b>	Manages forests for economic and recreational purposes. Maps forest areas. Estimates the number of trees and future growth. Plans cutting programs.
<b>Wildlife Biologist</b>	Studies habitat, development, growth and influences on wildlife habitat. Make plans for survival and population control of wildlife.

Learn More Online  [glencoe.com](http://glencoe.com)

**Career Investigations** Go to this book's Online Learning Center for activities and worksheets to help you explore careers.



### Chapter Summary

#### Section 14.1 Resources and Conservation

Natural resources are materials that are supplied by nature. Some are nonrenewable and can be damaged by pollution. The air you breathe may contain dust, smoke, chemical particles, and smog. Much of the earth's water is polluted. Energy is in limited supply. You may think that pollution and the shrinking supply of natural resources are beyond your control. However, you can make a difference by conserving resources.

#### Section 14.2 Protect the Environment

Protection of natural resources and the environment begins with you. Even though the waste problem is a national issue, the solution depends on individual actions. The key is to reduce the amount of waste we create. Do your part by following the “three Rs,” which are reduce, reuse, and recycle. Reduce the amount of waste created. Reuse items you might otherwise throw away. Recycle waste items into products that can be used.

### Words You Learned

- Write a sentence using two or more of these content and vocabulary words. The sentence should clearly show how the words are related.

#### Content Vocabulary

- natural resource (p. 305)
- pollution (p. 305)
- soil (p. 306)
- fossil fuel (p. 306)
- conservation (p. 307)
- recycling (p. 312)
- landfill (p. 312)
- decompose (p. 312)
- incineration (p. 312)
- biodegradable (p. 314)

#### Academic Vocabulary

- key (p. 305)
- efficient (p. 307)
- dispose (p. 312)
- permanent (p. 314)

### Review Key Concepts

- Identify** the four key natural resources and why we need to protect them.
- Explain** how you can do your part to conserve water and energy.
- Define** what is meant by “throwaway” society.
- Describe** the negative effects of landfills and incineration.
- Name** the “three Rs”.

### Critical Thinking

- Predict** how recycling can make a difference to you personally.
- Evaluate** how waste created in the kitchen can be reduced, reused, or recycled.
- Compare and contrast** these options for drinking beverages: wash a ceramic cup over and over, and use a new foam cup for every drink. Which do you think is better for the environment?



## Real-World Skills and Applications

### Problem-Solving

10. **Adopt a Mile** Many communities provide ways for individuals, organizations, or businesses to help maintain sections of roadside by “adopting” a section of road. Conduct research to find out what these programs do for the environment, and how you can volunteer.

### Technology Applications

11. **Deforestation** Conduct research to find out about deforestation. What does deforestation mean? What causes deforestation? What are the effects of deforestation? Use presentation software to share your findings. Include graphics, photographs, and descriptive text.

### Financial Literacy

12. **Recycling Pays** Research the law in your state to see how much money you can receive for recycling beverage containers. You can usually find this amount printed on the side of bottles and cans. If you recycled all of the glass and aluminum drink containers you use in a week, how much money would you have at the end of a week? A 4-week month? A 52-week year? If your state does not pay for recycling, calculate the numbers using a fee of 5 cents per container.



13. **Pressed-Flower Bookmarks** Create bookmarks using pressed flowers. Gather small flower blossoms in several colors, paper towels or tissue paper (if you can find tissue paper left over from a gift-wrapping project, reuse it!), a few heavy books, scissors, and clear contact paper. Place the flowers between paper towels or tissue paper and set the heavy books on them overnight. Place the pressed flowers between two sheets of contact paper and gently push out any air bubbles. Cut the bookmarks into strips, about 4 inches long and 1½ inches wide. In what other ways can you use pressed flowers?

14. **Research Nuclear Energy** Nuclear energy is stored in the nucleus (center) of an atom. Atoms are tiny particles that make up every object in the universe. Conduct research to find out how this energy is released to produce electricity. Why is nuclear energy considered cleaner than traditional forms of energy? Prepare a brief presentation about your findings.



15. **Household Hazardous Waste** The Environmental Protection Agency (EPA) has given the name “household hazardous waste” to leftover household products that contain poisonous, flammable, or reactive ingredients. With permission from your parents or teacher, go online to learn about the dangers of household hazardous wastes. Create a list of hazardous products that might be found in the typical home. Then write a list of tips to safely store and dispose of household hazardous waste. Keep a copy of the tips in your Life Skills Binder.

## Academic Skills



### English Language Arts

16. **Write a News Story** A technique used by journalists when writing a news story is to ask and answer these six questions: Who? What? When? Where? Why? How? Choose a topic from this chapter, such as pollution, energy use, or wildlife protection. Using the six questions, write an article for your school newspaper that inspires other students to do something positive for the environment.

**NCTE 4** Use written language to communicate effectively.



### Social Studies

17. **Identify Influences** Interview your parents, grandparents, or other older relatives about how and why attitudes toward the environment have changed since they were your age. Ask questions about the three Rs, nuclear energy, waste disposal concerns, and other environmental issues. Summarize your findings in a short essay.

**NCSS IV F Individual Development and Identity** Analyze the role of perceptions, attitudes, values, and beliefs in the development of personal identity.



### Mathematics

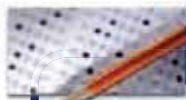
18. **Save Water** Vanessa's kitchen faucet has been dripping for three days at a steady rate of one drip every two seconds (or 30 drips per minute). If it takes 8,000 drips to fill up a two-liter soda bottle, how many two-liter soda bottles could Vanessa fill with all of the water that dripped in three full days?

#### Math Concept Multi-Step Problems

When solving problems with more than one step, think through the steps before you start.

**Starting Hint** Since there are 60 minutes in one hour, and 24 hours in one day, determine the total minutes in three days by multiplying  $3 \times 24 \times 60$ . Since there are 30 drips per minute, multiply the total minutes by 30 to find the total number of drips. Divide that number by 8,000 to determine how many soda bottles could be filled with those drips.

**NCTM Number and Operations** Compute fluently and make reasonable estimates.



## Standardized Test Practice

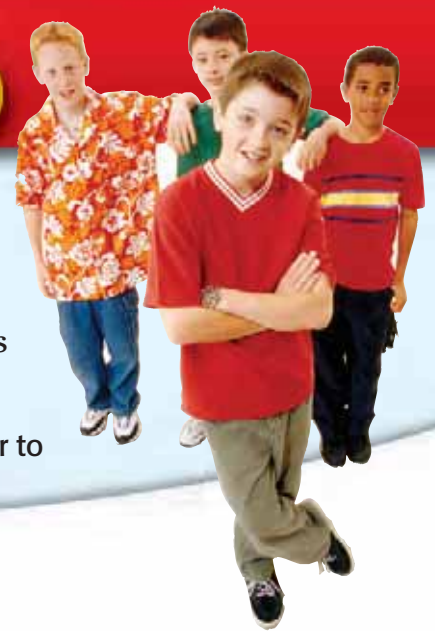
### Open-Ended Response

An open-ended response requires more than a simple yes or no answer. It can usually be answered with one or two sentences.

**Test-Taking Tip** Open-ended test questions most often require a specific response rather than an opinion. They may include definitions, comparisons, or examples.

Write one or two sentences to answer the questions.

19. Why should you practice conservation?  
20. What are biodegradable products?  
21. How is an energy-efficient appliance beneficial?



## Improve Your Home

You probably spend a lot of time at home, so why not make your living space as attractive and functional as possible? Magazines, home stores, and the homes of your friends can give you ideas. This project can help you learn how to improve the space you live in.



**My Journal** Complete the journal entry from page 279, and refer to it to complete your evaluation of the place you live.

### Project Assignment ▼

#### In this project, you will:

- Evaluate your living space for ways it can be improved.
- Draw two floor plans for a room showing how you can change it.
- Describe how you would make the room better.
- Interview someone who designs or builds homes or furnishings for a living.
- Present your findings to your class.
- Include this project in the sixth section of your personal Life Skills binder.

#### Step 1

#### Observe How Rooms are Used

Spend a few hours observing the way people use rooms and living spaces. Write a summary of your observations that identifies problems in how the room looks or functions.

#### Step 2

#### Draw Two Floor Plans

Choose the room or area you want to redesign and measure it. Create two scale-model floor plans. On the first, draw in the furniture of the room the way it looks now. On the second, lay out your new arrangement. Then write two or more paragraphs that answer these questions:

- ✓ What problems are you trying to solve?
- ✓ How does the new plan improve functionality?
- ✓ Describe the new look of your room.
- ✓ Does your new room plan allow for wiser energy use and less waste?

#### Step 3

#### Interview Someone Who Works in Design or Construction

Interview someone in your community who is a professional builder or designer. Ask these questions:

- ✓ How would you fix the problems in this room?
- ✓ What are the most common safety issues you encounter in your work?
- ✓ What ways do you keep your work environmentally friendly?

Use these interviewing skills when conducting your interview and these writing skills when writing the summary of notes from your interview.

#### Interviewing Skills

- Record interview responses and take notes.
- Listen attentively.

#### Writing Skills

- Use complete sentences.
- Use correct spelling and grammar.



## Step 4 Create and Present Your Room Improvement Design

Use the Life Skills Project Checklist on the right to plan and complete your floor plans and give an oral report comparing the two plans.


Use these speaking skills when presenting your final report.

### Speaking Skills

- Speak clearly and concisely.
- Be sensitive to the needs of your audience.
- Use standard English to communicate.

## Step 5 Evaluate Your Presentation

Your project will be evaluated based on:

- ✓ Organization and attention to detail of your room evaluation.
  - ✓ The accuracy and creativity of your floor plans.
  - ✓ The description of improvements to your room.
  - ✓ The summary written from interview notes.
  - ✓ Grammar and sentence structure.
  - ✓ Presentation to the class.
  - ✓ Creativity and neatness.
-  **Evaluation Rubric** Go to this book's Online Learning Center through [glencoe.com](http://glencoe.com) for a rubric you can use to evaluate your final project.

## Life Skills Project Checklist

### Research How Rooms Are Used

- ✓ Evaluate rooms that could be improved.
- ✓ Measure and draw an accurate floor plan of the current room layout.
- ✓ Draw a floor plan that shows how you would improve the layout.
- ✓ Interview an architect, construction worker, or interior designer in your community.

### Writing Skills

- ✓ Describe the design problems in the room.
- ✓ Describe how your changes improve that room.
- ✓ Write a summary from your interview with a person who works in construction or design.

### Present Your Findings

- ✓ Prepare a short presentation to share your two floor plans and compare the problems in the first to the solutions in the second.
- ✓ Invite the students of the class to ask any questions they may have. Answer these questions with responses that respect their perspectives.
- ✓ Add this project to your Life Skills binder.

### Academic Skills

- ✓ Conduct research to gather information.
- ✓ Communicate effectively.
- ✓ Organize your presentation so the audience can follow along easily.
- ✓ Thoroughly express your ideas.

**NCTM Measurement** Apply appropriate techniques, tools, and formulas to determine measurements.

**NCTE 12** Use language to accomplish individual purposes.